

**COMPLETE STATEMENT OF**  
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**U.S. ARMY CORPS OF ENGINEERS**  
**DEPARTMENT OF THE ARMY**

**BEFORE THE**  
**Subcommittee on Water Resources and Environment**  
**Committee on Transportation and Infrastructure**  
**UNITED STATES HOUSE OF REPRESENTATIVES**  
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Introduction

Mr. Chairman and distinguished members of the Subcommittee, I am Lieutenant General Carl A. Strock, Chief of Engineers. I am honored to be testifying before your Subcommittee today, along with the Assistant Secretary of the Army (Civil Works), the Honorable John Paul Woodley, Jr., on ways in which the Corps of Engineers can assist in the water resources planning for a rebuilt New Orleans. My testimony today will provide a brief status of our post-Katrina assessments and describe how the Corps of Engineers can facilitate and leverage the Nation's public and private engineering activities to assist in the planning, design, and reconstruction of New Orleans and vicinity.

Background

We are continuing to execute the Corps FEMA-related missions of debris management, roofing, and un-watering in the impacted area. As of now, all areas are essentially dry. With our contractors, we are working around the clock on the levees and floodwalls to provide an interim level of protection to see the city through this hurricane season, which continues until the end of November, and the rainy season that the city normally experiences in December and January. Our goal is to restore the pre-storm level of protection before the start of the next hurricane season, which begins in June 2006. We

are actively gathering data and information from the recent storms, and we have also begun an after action assessment of the hurricane protection system.

### Performance of Hurricane Protection Systems in New Orleans and Surrounding Areas

We are mapping the damage to the hurricane protection systems as part of our after action review process. The Engineering Research and Development Center from Vicksburg, Mississippi has deployed a team to New Orleans to catalogue data observed during the rescue and recovery operations, and to perform surveys of the hurricane protection system. In addition, the Corps is hosting two visiting teams. One is a National Science Foundation (NSF) team from California that is looking for lessons learned to apply to levee systems in their Central Valley area. The second team is a group of volunteers from the American Society of Civil Engineers (ASCE). ASCE routinely visits hurricane-impacted areas to study lessons learned to apply to the development of new criteria for the design of infrastructure. A team from the Louisiana Department of Transportation and Development, which includes Louisiana State University (LSU) has joined the Corps, ASCE and NSF. The four teams are working together in the field and are sharing collected data. This analysis is essential to ensuring that the restoration of flood and hurricane protection for the City of New Orleans is accomplished in the most technically sound, environmentally sustainable and economical manner. We will make all findings available to the public and invite the public and the scientific and engineering community to share any information they may have.

As for the evaluation phase, the Secretary of the Army has requested that the National Academy of Sciences conduct a forensic analysis and independent peer review of the performance of the hurricane protection system. The purpose of the forensic analysis and independent peer review is to provide credible and objective engineering and scientific answers to fundamental questions about the operation and performance of the hurricane protection system. Through such an analysis, we will be able to evaluate the performance of the system during the storm, evaluate its performance in recovering from the flooding, identify any weaknesses, and recommend ways to improve the performance of the hurricane protection system at the authorized level of protection.

### Our future role in the disaster area

In his address to the Nation last month, the President made three commitments. The first commitment was to meeting the immediate needs of those who had to flee their homes and leave all their possessions behind. The next two were specific to the restoration of the disaster area. The President's second commitment is to help the citizens of the Gulf Coast overcome this disaster, put their lives back together, and rebuild their communities. The Corps is working to replace hundreds of public buildings in Mississippi, including police and fire stations, city halls, post offices and other governmental buildings. We have already delivered a building to the De Lisle Fire Department. Corps employees are also putting children back in classrooms, again helping to bring towns back to a bit of normalcy, throughout Mississippi. Governor

Barbour, Governor Blanco, Mayor Nagin, and other state and local elected officials will have the primary role in planning for their own futures. For instance, communities will need to move decisively to change zoning laws, building codes and flood plain management plans as necessary to assure the greatest efficacy for the engineering solutions to future storm events. The Corps stands ready to work in close partnership with the states of Louisiana and Mississippi, the city of New Orleans, and other Gulf Coast cities, so they can rebuild in a thoughtful, well-considered way. The Corps is likely to have an active role in the restoration of public infrastructure in the disaster zone. Because of the breadth of its expertise, the Corps has the unique capability to facilitate and leverage the Nation's public and private engineering and technical activities to address national infrastructure problems like the security and restoration of public works infrastructure.

The President's third objective is that communities be rebuilt better and stronger than before the storm. Protecting a city that sits lower than the water around it is not easy, but it can, and has been done. City and Parish officials in New Orleans and surrounding parishes and State officials in Louisiana will have a significant and active role in planning how this region is rebuilt. The President has directed the Corps of Engineers to work with them to make the flood and storm damage reduction system better than it was before the storm.

The Corps completed a reconnaissance study in August 2002 that concluded that there is a federal interest in examining a higher level of protection. Development of a better hurricane and flood protection system is an extremely complex issue, and more analysis is required to evaluate the range of options and determine the best way to reduce the risk of future flood and storm damages. We will work with local officials, and all interested persons to advance these investigations as expeditiously and cost-effectively as possible. In collaboration with FEMA officials, actions are being taken to ensure appropriate levels of protection from flooding are implemented.

In a feasibility study for a higher level of protection than currently authorized, a full suite of alternatives would be developed and analyzed for economic and environmental benefits and impacts, and mitigation plans developed where necessary. Any potential solutions would be fully coordinated with elected officials and other decision makers, stakeholders, and the public, and fully integrated with other water resources decisions. The current estimate for such a feasibility study is \$12 million, which would be shared 50/50 with non-Federal interests. It is expected that such a study could be completed in 2-3 years, under an expedited timeframe and subject to the negotiation of a cost sharing agreement and availability of Federal and non-Federal funding.

As we set about the process of evaluating potential changes to the flood and storm damage reduction system in the New Orleans area, we must not lose sight of the important role that the Louisiana coastal area and the coastal wetlands play. Many of the features of the proposed Louisiana Coastal Area Ecosystem Restoration Project would provide a benefit by preventing on-going wetlands loss through subsidence, creating new marsh and nourishing existing marsh. While there is adequate justification

for coastal wetlands restoration for a host of reasons, it is also certain that these features would also provide an important component of the storm damage reduction system by helping to maintain the integrity of the landscape surrounding that system. According to the United States Geological Survey, one mile of wetland reduces storm surge by one foot. It is crucial that the storm damage reduction system include components that complement coastal restoration and management features.

This concludes my statement. Again, I appreciate the opportunity to testify today. I would be pleased to answer any questions you may have.